

Claims

1. Method for the preparation and bottling of liquids, in particular beverages, enriched with oxygen or with an oxygen/gas mixture in containers, in particular bottles or cans, wherein the liquid enriched with oxygen and if applicable other gases, in particular in dissolved form, is filled into containers and said containers are then sealed pressure-tight, characterized in that the enriched liquid is kept under a nitrogen atmosphere at least part of the time during the bottling process.
2. Method according to the preamble of claim 1, characterized in that the liquid is kept under a nitrogen atmosphere at least part of the time starting from the time of enrichment with oxygen or an oxygen/gas mixture.
3. Method according to claim 1 or 2, characterized in that the liquid is kept under a nitrogen atmosphere starting from the time of enrichment until the desired fill height in the container is reached.
4. Method according to at least one of preceding claims 1 through 3, characterized in that the nitrogen atmosphere has overpressure, preferably in the range between 1 and 10 bar.
5. Method according to at least one of preceding claims 1 through 4, characterized in that, prior to the introduction of the enriched liquid, a container is prepressurized with nitrogen, in particular to a pressure corresponding to the fill pressure of the liquid.
6. Method according to at least one of preceding claims 1 through 5, characterized in that, prior to the introduction of the liquid, in particular prior to the prepressurization, the container is flushed at least once, preferably with nitrogen.

7. Method according to at least one of preceding claims 1 through 6, characterized in that the container is evacuated at least once prior to the introduction of the liquid, in particular prior to a prepressurization with nitrogen, preferably before and/or after a flushing of the container, preferably with nitrogen.
8. Method according to claim 6 or 7, characterized in that when the liquid is introduced into the container, return gas expelled therefrom is collected and used for a flushing treatment of subsequent containers.
9. Method according to at least one of preceding claims 1 through 8, characterized in that a gas in liquid phase, preferably liquid nitrogen and/or oxygen, is introduced into the container prior to the introduction of the liquid, in particular prior to an evacuation step.
10. Device for the preparation and bottling of liquids (45), in particular beverages, enriched with oxygen or with an oxygen/gas mixture in containers (40), in particular bottles or cans, wherein the liquid enriched with oxygen and if applicable other gases, in particular in dissolved form, is filled into the containers by the device and said containers are then sealed pressure-tight with a closure, in particular for carrying out the method according to at least one of claims 1 through 9, characterized in that the device (7) has at least one filling element (11) with a liquid valve (18), at least one gas valve (23, 34), and a nitrogen-filled chamber (10, 29, 30), wherein a flow connection for flushing and/or prepressurizing the container (40) with nitrogen can be established between a container (46) applied to the filling element (11) and the chamber (10, 29, 30) by means of the gas valve (23, 24).

11. Device according to claim 10, characterized in that the filling element (11) can be connected to a flush gas channel (30) by means of a flush valve (23) and/or to a pure gas channel (29) by means of a prepressurization valve (24).
12. Device according to claim 10 or 11, characterized in that the filling element (11) can be connected to a relief and/or vacuum channel (30) by means of at least one relief valve (26, 27)).
13. Device according to at least one of claims 10 through 12, characterized in that the device (7) has a vat (8) partially filled with liquid (9), and the liquid in the vat can be pressurized with nitrogen, preferably in the range from 1 to 10 bar.
14. Device according to the preamble of claim 1, characterized in that, after enrichment with oxygen, a liquid is conveyed into a partially filled tank (15) and can be pressurized with nitrogen.
15. Device according to claim 13 or 14, characterized in that the liquid in the vat (8) and/or tank (15) can be separated from the pressure-exerting gas at least nearly completely, in particular by movable floats (43, 44) or elastic membranes.
16. Device according to the preamble of claim 1, characterized in that the device (7) for filling containers (40) is preceded by an apparatus (41) for introducing liquid gas, in particular nitrogen or oxygen, into the open containers.